REMARKS

Reconsideration of this patent application is respectfully requested in view of the foregoing amendments, and the following remarks.

Claims 1-7 were rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1-7, the Patent Examiner stated that the numerals with parentheses should be removed from the claims. In response to this objection, claims 1 to 7 were amended to cancel numerals in parentheses.

Regarding claim 1, line 1 recites "a system." The Patent Examiner stated that however, the claim does not include clear physical structures forming the system. In response to this objection, claims 1 to 8 in the preamble of each claim now recite a "data transmitting system."

Regarding claim 6, line 3 recites "as is known." The Patent Examiner stated that this language should be removed from the claim. In response to this objection, claim 6 was amended to cancel "as is known."

For all these reasons, it is firmly believed that all the

claims are in complete compliance with all the requirements of 35 U.S.C. 112. Withdrawal of this ground of rejection is respectfully requested.

On Page 3 of the Office Action, claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Hoenniger, III et al., US 4,885,538* in view of *Machida et al., US 6,122,257*.

The Applicants comment upon the prior art rejection of the claims as follows.

The present invention is directed to a data transmitting system for a serial bidirectional bus with a control device comprising a send and receiving unit for data fields combined into a data frame, and with bus subscribers connected in series which comprise an evaluation circuit for reading in and reading out data fields in data frames, wherein each bus subscriber comprises a test circuit to determine whether it is located at the bus end opposite of the control device, with at least the bus subscriber at the bus end comprising a send device for a data frame, wherein at least the bus subscriber at the bus end comprises a control stage which is activated by a received data frame sent by the control device over the serial bidirectional bus and triggers the send device depending on the receipt of a data frame, for sending a data frame over the serial

bidirectional bus in the direction of the control device whereas the sent data frame contains at least data fields for all bus subscribers and said data frame is handed over from one bus subscriber to the next bus subscriber.

It is respectfully submitted that *Hoenniger* together with *Machida* do not render the present invention obvious.

Hoenniger describes a ring type bus with separate forward and backward lines (See Fig. 2). In a ring type bus there is no bus end and there is no need to identify a bus end as every bus subscriber receives data frames via its input and sends data via its output, irrespective of its position in the bus. There is one bus subscriber that has the output connected to its input for looping back the data (to form the ring). But this has nothing to do with a bus end in the sense of the invention. This bus subscriber does not even realize that its output and input are connected. See also the discussion of ring busses in the Remarks portion of the Response filed March 21, 2011.

Let it be assumed that subscriber 400n in Fig. 2 of *Hoenniger* is the "bus end opposite of the control device" (although this is not possible), then this bus subscriber would not have to know that it is the bus end as it simply sends every data message via its output. Subscriber 400n does not have to

care about the fact that this message is again received via its input and, consequently, does not need to determine that it is the bus end.

The issue then becomes why should one skilled in the art add a feature (detection of a bus end) to *Hoenniger* that is not needed at all and that makes no sense at all in the context of *Hoenniger*? It is not enough that the teachings of two prior art documents possibly can be combined, but there must be a rationale to combine the documents. Such a motivation to combine is not seen with respect to *Hoenniger* and *Machida*.

Furthermore, it is denied that *Machida* shows the detection of a bus end at all. The Office Action concludes from the presence of a terminal resistance 26 and a terminal address detecting circuit 20 in an adapter 2 that a bus end is detected. This conclusion is respectfully traversed. A terminal resistance is a passive element that is only needed in certain types of busses (as in coaxial cable based LAN as in *Machida*, see col. 4, l. 51-56) to prevent signal reflections at the otherwise open cable ends (see col. 4, l. 63-65)- this is basic knowledge in the field of data communications busses. The terminal address detecting circuit 20 simply determines the address of the data source (see col. 6, l. 57-62). How the detection of a data source address can serve to determine a bus end is not comprehensible

and cannot be concluded from the cited col. 7, l. 25-37.

Contrary to the Patent Examiner's opinion, the adapters 1, 2 of *Machida* serve to terminate the open bus cable by the terminal resistance and to detect the position of the terminals, i.e. the distance for each terminal, but are not bus subscribers (=terminals). In a bus like in *Machida* there is not even a subscriber (terminal) located at the bus end. The terminals branch off from the bus cable and, hence, such a bus is not a serial bus.

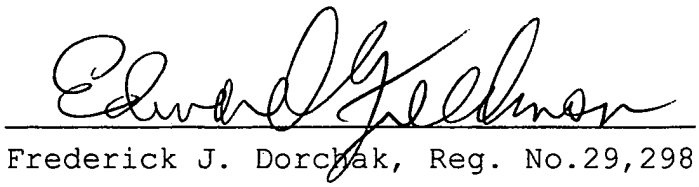
It is respectfully submitted that there is no possibility that an adapter of *Machida* (being located at an open cable end and containing the test circuit according to the Patent Examiner) could be added to a ring type bus as in *Hoenniger* (having no open cable end by definition). Moreover, it is not seen what sense a terminal resistance would make in a ring type bus.

Also from the discussion of *Machida* above it is evident that the teachings of *Machida* cannot be combined with *Hoenniger* in a useful way.

For all these reasons, it is respectfully submitted that all the claims are patentable under 35 U.S.C. 103 over all the prior art applied by the Patent Examiner. Withdrawal of this ground of rejection is respectfully requested.

A prompt notification of allowability is respectfully requested.

Respectfully submitted,
Josef RAINER ET AL



COLLARD & ROE, P.C.
1077 Northern Boulevard
Roslyn, New York 11576
(516) 365-9802

Frederick J. Dorchak, Reg. No.29,298
Edward R. Freedman, Reg. No.26,048
Attorneys for Applicants

ERF:dmc

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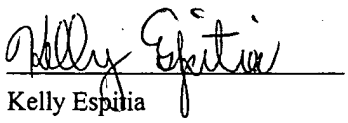

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